

SENIOR HYDROLOGIST

DEFINITION: Under general direction, performs advanced professional hydrology work in studying surface and ground water activities under the general research objectives set by upper management level staff; provides overall expertise on most surface and ground water hydrology, water resource management and erosion control; supervises others on assigned projects; performs related work as assigned.

ESSENTIAL FUNCTIONS: This list is ILLUSTRATIVE ONLY and is not a comprehensive listing of all functions and tasks performed by incumbents of this class.

TASKS:

May serve as project leader/supervisor for hydrologic, geophysical and geologic studies and research; participates and/or supervises the collection of field data by other hydrologists and technicians; assures timely accomplishment of field related studies; makes geohydrologic and geophysical investigations involving the application of theories and principles of the physical science; prepares detailed plans for the execution of these studies within specified time frames, including the selection of appropriate research methods most suitable for achieving the study objectives.

Conducts and reports on scientific findings; modifies established guidelines and investigative techniques conducive to the hydrologic project under study; develops and defends specific research reports, proposals, methods and approaches; collects, interprets, analyzes and evaluates hydrologic data; provides facts about water resources and water management so reasonable decisions and judgment on water issues may be made by decision makers; provides statistical and mathematical calculation showing impact on the Nation's water economy.

Collects, processes and analyzes data for climate monitoring and drought planning; develops drought contingency plans to prevent or minimize impact; identifies mitigation measures and triggering them with a quantitative drought index; develops proposals for funding ongoing studies; sets, implements and enforces federal, state and Navajo Nation regulatory policies for both physical and chemical concentrations; assesses Navajo Nation water for quality and prepares technical reports; investigates, reviews and prepares reports related to wastewater treatment, mining, hydro modifications, oil and gas production spills, landfills, industrial discharges, agricultural and road construction activities.

Conducts policy related research and analysis pertaining to water codes as related to the use, retention and protection of the Nation's water resource; assists in the preparation of technical information and testimony associated with research and analysis; reviews and interprets technical reports of applications for drilling permits and makes final recommendations to appropriate authority; assists in the development, implementation and enforcement of federal, state and Navajo Nation codes and regulations.

Inspects and investigates alleged violations; develops or recommends enforcement actions; monitors activities to determine compliance with regulations and codes; designs and implements watershed restoration projects from grant preparation to implementation; develops bio-assessment techniques including identifying reference sites and other long-term monitoring stations; conducts analysis of water samples.

Conducts survey inspections; develops standards and guidance documents; may assign and supervise inspection teams in the field; develops and maintains the geographical information system (GIS); develops and maintains databases that track assessments, investigations and compliance; assists in the preparation of federal and state EPA reports; develops construction standards for public water systems (PWS); reviews proposed projects for impact on water quality or water resources.

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KNOWLEDGE, SKILLS AND OTHER CHARACTERISTICS:

Knowledge of professional hydrology and hydro -geology methods, practices and procedures.
Knowledge of federal, state and Navajo Nation laws, rules, regulations, and guidelines related to water resources, rights, quality, reclamation and protection.
Knowledge of Global Positioning and Geographical Information Systems methods, applications and procedures.
Knowledge of hydrological models, industry standards, US. Geological Surveys and their relationship to water resources.
Knowledge of supervision and administration methods and practices.
Knowledge of research, analysis and interpretation methods; field investigation methods and practices.
Knowledge of computer hardware, software and peripherals.
Knowledge of the development, preparation and writing of proposals and grants.
Skill in prioritizing, scheduling, assigning reviewing and evaluating work.
Skill in preparing reports, recommendations, proposals or grant applications based on research, analysis, and interpretation for best practices.
Skill in utilizing effective written and verbal communication in the development of expert testimony, research analysis, reports, recommendations and technical information.
Skill in investigating and accurately interpreting information related to compliance or protection of water resources.
Skill in utilizing public relations/customer service techniques when responding to inquiries, requests and complaints.
Skill in coordinating projects with multiple public and private entities.
Skill in establishing and maintaining effective working relationships.

PHYSICAL REQUIREMENTS AND WORK ENVIRONMENT: Work requires occasional field investigations over rough terrain that may involve wearing HazMat suits or other personal protection.

MINIMUM QUALIFICATION:

- A Bachelor's degree in Hydrology, Engineering, Geology, Environmental Science, Physics or closely related field; and four (4) years of progressively responsible professional level hydrology experience.

PREFERRED QUALIFICATIONS:

- A Master's degree in Hydrology, Engineering or Geology.
- Two (2) years of progressively responsible professional experience in hydrology, geology or engineering.

SPECIAL REQUIREMENTS:

- Possess a valid state driver's license and complete OSHA HAZMAT training.

Supplemental Requirements:

Incumbent must obtain a Navajo Nation Vehicle Operator's Permit within 90 days of date of hire.

Depending upon the needs of the Nation, some incumbents of the class may be required to demonstrate fluency in both the Navajo and English languages as a condition of employment.